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PATENT ABSTRACTS OF JAPAN

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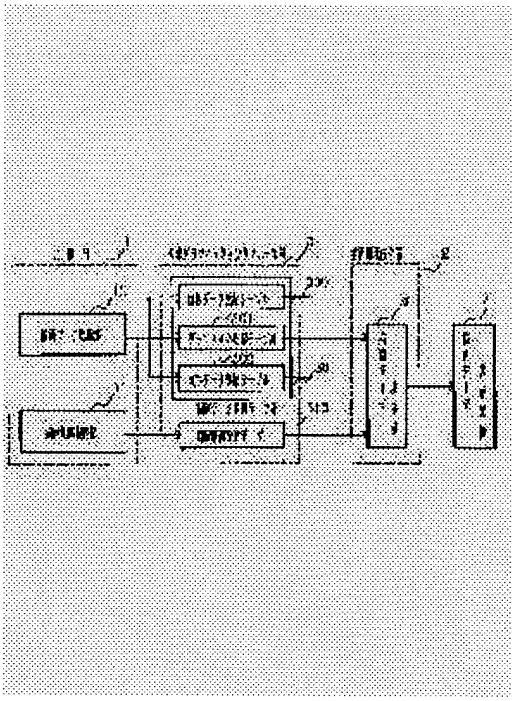
(54) GRAPHIC PLOTTER

(57)Abstract:

PURPOSE: To easily perform transportation to different plotting circumstances even in the case of the change of plotting circumstances of hardware and software at the time of plotting picture data, graphic data, and character data on monitor and graphic display devices.

CONSTITUTION: The graphic plotter which plots picture data, graphic date, and character data on monitor and graphic display devices is separated into a part (part dependent upon plotting circumstances) 2 dependent upon plotting circumstances of hardware and software and a part (common part) 1 independent of them and is provided with a virtual graphic interface part 3 interposed between them. Since the common part 1 and the virtual graphic interface part 3 can be applied even at the time of the change of plotting circumstances of hardware and software and only the part 2 is changed to cope with this change, transportation to different plotting circumstances is easily performed.



LEGAL STATUS

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DETAILED DESCRIPTION

[Detailed Description of the Invention]
[0001]
[Industrial Application] This invention relates to the graphic drawing equipment which indicates image data, graphical data, and the alphabetic data by visual with rapid development of GUI (Graphical User Interface).
[0002]
[Description of the Prior Art] When drawing image data, graphical data, and alphabetic data to up to a monitor and graphic display conventionally, the drawing control which controls ON/OFF, a foreground color, etc. of various drawing needs registration of various drawing data, and to be set up. In consideration of the drawing environment of hardware and software, hard coding is carried out at registration of these drawing data, or a setup of drawing control. For example, when drawing drawing on the monitor in the system (image data, graphical data, and alphabetic data) on the graphic display of a workstation, or in drawing image data, graphical data, and alphabetic data on graphic display by workstation by which drawing environments differ, in consideration of the drawing environment of hardware and software, it is often necessary to carry out hard coding.
[0003]
[Problem(s) to be Solved by the Invention] The above-mentioned conventional technique is not taken into consideration about portability in case the drawing environments of hardware and software differ, but transplantation by different drawing environment serves as full coding modification, and has a problem. The purpose of this invention is to make transplantation by different drawing environment easy, also when image data, graphical data, and alphabetic data are drawn to up to a monitor and graphic display and the drawing environment of hardware and software changes.
[0004]
[Means for Solving the Problem] The drawing data display section equivalent to the part (drawing environmental dependence section) for which the above-mentioned purpose depends on the drawing environment of hardware and software, It separates into the drawing data registration section and the drawing control-point-setting section equivalent to the part (common section) independent of a drawing environment. When the virtual graphic interface section is prepared among both and drawing environments differ, it is attained by changing only the above-mentioned drawing environmental dependence section (the common section and the virtual graphic interface section diverting).
[0005]
[Function] The drawing data registration section and the drawing control-point-setting section perform registration of drawing data, and a setup of drawing control to the virtual graphic interface section, and the drawing data display section draws based on registration of the drawing data of the virtual graphic interface section, and a setup of drawing control. When the drawing environments of hardware and software differ, the drawing data registration section, the drawing control-point-setting section, and the virtual graphic interface section are diverted, and only the drawing data display section is changed. The candidate for drawing is easily transplantable with this.

[0006]
[Example] Hereafter, an example explains this invention. Drawing 1 is the block block diagram of the graphic drawing equipment of this invention example. In this Fig., the drawing environmental dependence section for which the common section for which 1 does not depend on the drawing environment of hardware and software, and 2 depend on the drawing environment of hardware and software, the virtual graphic interface section to which 3 is located between the common section 1 and the drawing environmental dependence section 2, and 4 are drawing data display systems, such as a monitor and graphic display. The virtual graphic interface section 3 consists of an image data registration table 300 and a graphical data registration alphabetic data registration table [drawing control-point-setting] 301, 302, and 310, and calls the image data registration table 300, the graphical data registration table 301, and the alphabetic data registration table 302 generically the drawing data registration table 30.
[0007] The internal configuration of the image data registration table 300 is illustrated by drawing 2 , and records a drawing location (X coordinate, Y coordinate), drawing brightness (R component, G component, B component), etc. which draw image data. The internal configuration of the graphic registration table 301 is illustrated by drawing 3 , and records the drawing location (X coordinate, Y coordinate) used as the criteria of graphical data, various parameters, drawing brightness (R component, G component, B component), a graphic form kind, etc. The internal configuration of the alphabetic data registration table 302 is illustrated by drawing 4 , and records the drawing location (X coordinate, Y coordinate) located in the head of alphabetic data, drawing brightness (R component, G component, B component), a character string, etc. The internal configuration of the drawing control-point-setting table 310 is illustrated by drawing 5 , and records ON/OFF of drawing to image data, graphical data, and alphabetic data.
[0008] The common section 1 consists of the drawing data registration section 10 and the drawing control-point-setting section 11. The drawing data registration section 10 registers the information on drawing data into the drawing data registration table 30 in the virtual graphic interface section 3. Moreover, the drawing control-point-setting section 11 registers the information on drawing data into the drawing control-point-setting table 310 in the virtual graphic interface section 3. The drawing environmental dependence section 2 is constituted by the drawing data display section 20. The drawing data display section 20 reads the drawing data to need based on a setup of the drawing control-point-setting table 310 in the virtual graphic interface section 3 from the drawing data registration table 30 of the virtual graphic interface section 3, and draws to the drawing data display system 4. As shown in drawing 6 , the three-tiered structure which arranges alphabetic data in the top layer and then arranges image data in graphical data and the lowest layer performs this drawing. In addition, when extending the variation of drawing, the registration item of the drawing data registration table 30 in the virtual graphic interface section 3 is extended.
[0009] The flow chart of drawing 7 shows actuation based on the relation of the common section 1 explained above, the drawing environmental dependence section 2, and the virtual graphic interface section 3. It explains to a detail below. In this explanation, the module of the drawing control-point-setting section 11 of drawing 1 is the drawing control-point-setting module 100, and is illustrated below.

disp_ctl Control of :drawing is set to a drawing control-point-setting table. -- (1)
Moreover, the module of the drawing data registration section 10 of drawing 1 is the drawing data registration module 200, and is illustrated below.
image : image data is registered to an image data registration table (2).
polyline : it is graphic registration TEBU about the graphical data of the polygonal line. It registers to RU..... (3)
rect : it is graphic registration TEBU about rectangular graphical data. It registers to RU..... (4)
polygon : it is graphic registration TEBU about polygonal graphical data. It registers to RU..... (5)

circle : it is the graphical data of a circle to a graphic registration table. It registers..... (6)
ellipse : it is a graphic registration table about the graphical data of an ellipse. It registers..... (7)
text : alphabetic data is registered to an alphabetic data registration table (8).
Furthermore, the module of the drawing data display section 20 of drawing 1 is the drawing data display module 220, and is illustrated below.
disp : the read drawing data are drawn to a drawing data display system. (9)
The drawing control-point-setting module 100 illustrated to (1) is a module which has the function to set the candidate for drawing as a drawing control-point-setting table (drawing 1 -310) at step 110. (2) The drawing data registration module 200 illustrated to - (8) is a module which has the function to call the drawing data display module 220 illustrated to (9) after registering drawing data into a drawing data registration table (drawing 1 -30), at step 210. The drawing data display module 220 illustrated to (9) first judges whether according to the contents of a setting of a drawing control-point-setting table (drawing 1 -310), it draws to a drawing data display system (drawing 1 -4) at step 221, and when you have no drawing, it ends this module. Next, again, with reference to the contents of a setting of a drawing control-point-setting table (drawing 1 -310), according to the contents of a setting, in with drawing, the drawing data (image data, graphical data, alphabetic data) concerned are read from a drawing data registration table (drawing 1 -30), and it generates drawing data at steps 223, 225, and 227 by steps 222, 224, and 226. Finally, the drawing data generated at step 228 are drawn to a drawing data display system (drawing 1 -4). Here, the drawing control-point-setting module 100 of (1) and the drawing data registration module 200 of (2) - (8) are equivalent to the common section 1 of drawing 1 . Moreover, drawing data display MOJIRU 220 of (9) is equivalent to the drawing environmental dependence section 2 of drawing 1 . If KODINKU [with the combination of the drawing data registration module 200 illustrated to the drawing control-point-setting module 100 illustrated to (1), and (2) - (8)] when drawing image data, graphical data, and alphabetic data to up to a monitor and graphic display, coding of headquarters will not be affected even if the drawing environment of hardware and software changes. What it depends for on change of a drawing environment is only the drawing data display module 220 illustrated to (9). Therefore, change of a drawing environment can be coped with only by modification of the drawing data display module 220 illustrated to (9). According to this example, by the above thing, to up to a monitor and graphic display Image data, KODINKU [with the combination of the drawing control-point-setting module 100 illustrated to (1) - (8), and the drawing data registration module 200] when drawing graphical data and alphabetic data By changing only the drawing data display module 220 illustrated to (9) according to the drawing environment of hardware and software, transplantation by different drawing environment can be performed easily.
[0010]
[Effect of the Invention] Since according to this invention the common section and the virtual graphic interface section are diverted and it can be coped with by modification of only the drawing environmental dependence section also when drawing image data, graphical data, and alphabetic data to up to a monitor and graphic display, and the drawing environment of hardware and software changes, it is effective in the ability to perform transplantation by different drawing environment easily.

[Translation done.]

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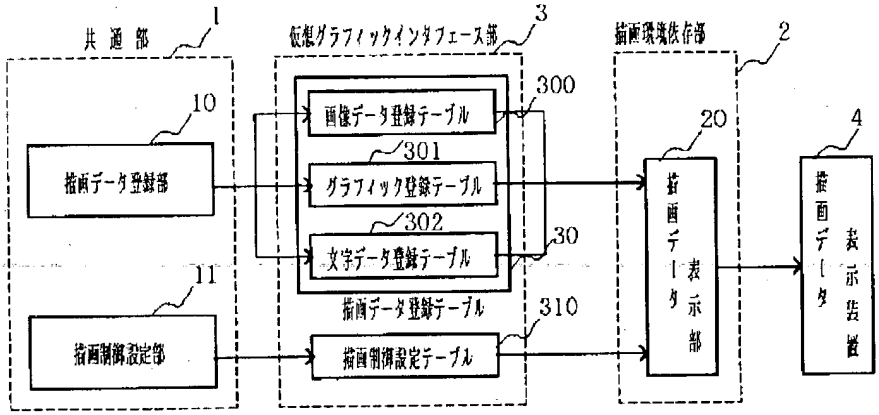
DRAWINGS

[Drawing 1]

【図１】



[Drawing 2]

【図２】

描画位置		描画輝度		
X座標	Y座標	R成分	G成分	B成分
X00	Y00	R00	G00	B00
X01	Y01	R01	G01	B01

[Drawing 3]

【図３】

描画位置					描画輝度			図形種
X座標	Y座標	1	2	……	R成分	G成分	B成分	
X10	Y10	P100	P101	……	R10	G10	B10	K0
X11	Y11	P110	P111	……	R11	G11	B11	K1

[Drawing 4]

【図４】

描画位置		描画輝度			文字列
X座標	Y座標	R成分	G成分	B成分	
X20	Y20	R20	G20	B20	S0
X21	Y21	R21	G21	B21	S1

[Drawing 5]

【図5】

画像データ描写	グラフィック データ描写	画像データ描写
ON/OFF	ON/OFF	ON/OFF

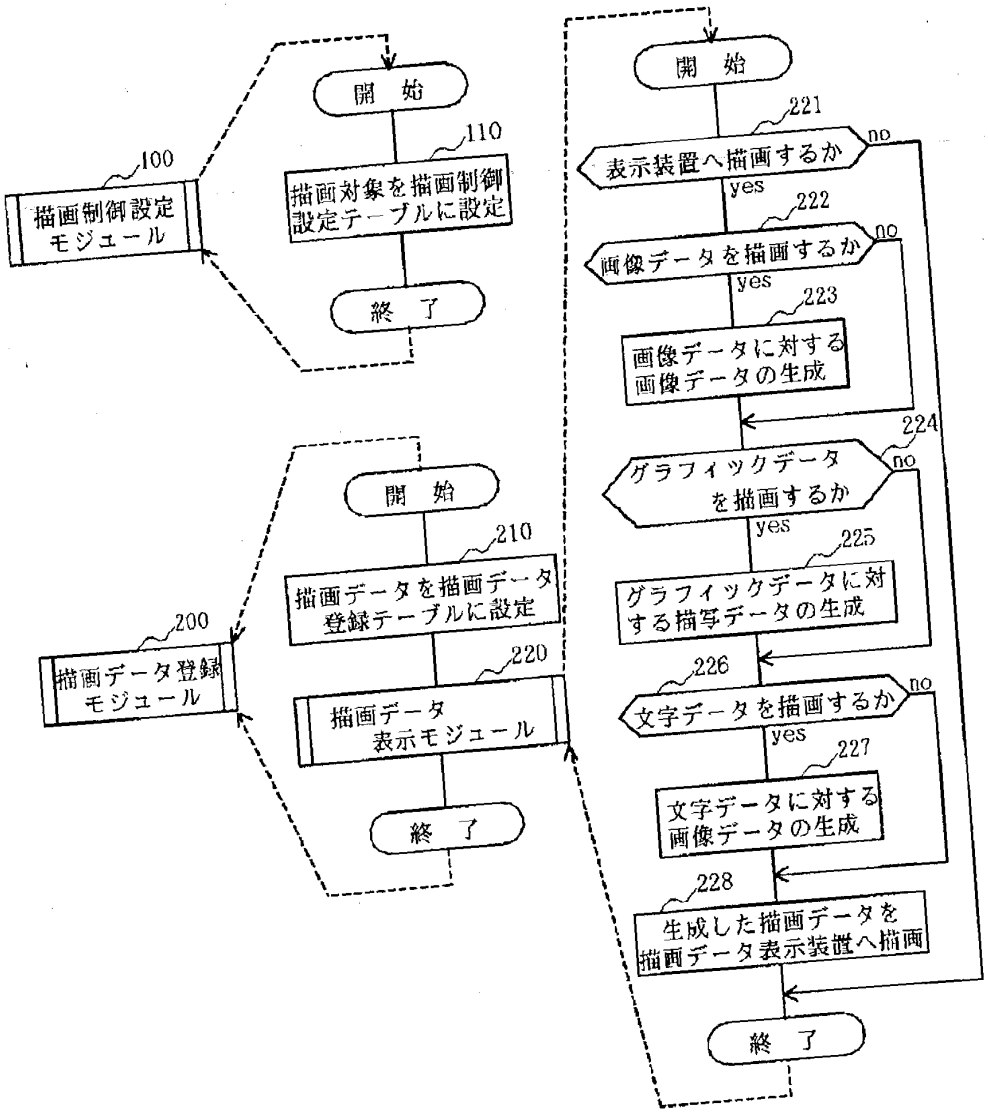
[Drawing 6]

【図6】

文字データ
グラフィックデータ
画像データ

[Drawing 7]

【図7】



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